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ABSTRACT

Sweden's educational system was analyzed to determine the degree of coherence that exists between compulsory education, upper secondary education (which in Sweden includes both vocational and general education), and the various forms of adult education available. First, the objectives and structure of the following components of Sweden's school system were described: compulsory schooling; upper secondary education (including apprenticeship training and special and independent upper secondary schools); and adult education (public adult education, national schools for adults, advanced vocational training, and popular education). The following forces facilitating coherence in Sweden's educational system were examined: shared fundamental values, common syllabi and course-based organization, and the transition from compulsory school to upper secondary school. Strategies for reforming upper secondary school and the coherence between education and training were discussed along with coherence between school and working life. The issue of coherence was also considered in relation to vocational education for adults, Sweden's Agenda 2000, existing labor market policy training programs, continuity between upper secondary education and higher education (including higher technical vocational education), and the role of local resource and community development centers. (Appended is information about the following: preschool education in Sweden; time-schedule for compulsory education; and the need for competence.) (MN)

CEDEFOP panorama

Coherence between compulsory education, initial and continuing training and adult education in Sweden

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Coherence between compulsory education, initial and continuing training and adult education in Sweden

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Dep. Assistant Under-Secretary
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Printed in Germany

Mrs Sonja Hjorth
Dep. Assistant Under-Secretary
Ministry of Education and Science
Sweden

Foreword

In 1994 Sweden and CEDEFOP adopted a framework agreement on modalities for CEDEFOP-EFTA cooperation within the EEA-agreement. As a result of this agreement Sweden can take part in CEDEFOP projects. The first project Sweden chose to participate in was "Coherence between compulsory education, initial and continuing training and adult education".

Having made the Swedish contribution, I am now presenting the Swedish report.

Stockholm 22.11.1994

Sonja Hjorth

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1 Introduction

The purpose of this paper is to describe the coherence between compulsory education, upper secondary education, which in Sweden includes both vocational and general education, in addition to adult education in different forms – all with an emphasis on preparation for a life in a changing society and on a constantly changing labour market.

The most important principle of Swedish education is equality of opportunity. The compulsory school is a comprehensive school, without streaming, open to all independent of social or ethnic background or geographical context. All young people up to the age of 20 have the right to begin studies in the upper secondary school. Adult education (for persons 20 years of age and older) has been called the "jewel in the crown" of Sweden's educational system.

There are not supposed to be any "dead ends" – neither in school, nor for grown ups. Recurrent education is one aspect of equality of opportunity as regards education in Sweden.

Although Sweden's educational system has an uncomplicated structure it should not be mistaken for a system which does not provide choice for the individual. Recent changes in Swedish educational structure provide a greater range of choice.

The second all-embracing principle of the Swedish school system is a new steering system which operates through management by objectives and results, and not by rules. This is a recent development. For many years control of Swedish schools was heavily centralized. Whereas in the old management system the State concentrated on the input of different kinds of resources, the new allocation of responsibilities concentrates on educational outcome.

The State lays down nation-wide goals and guidelines for schools and evaluates the results. Parliament makes general policy decisions on the objectives, time schedules and marking systems for the different types of schools. The Government decides on the curriculum, the syllabi for the compulsory school and on the core subjects of the upper secondary school and public adult education. The National Agency for Education decides on all the other syllabi. For locally determined subjects, the syllabi are decided by the municipalities. Every syllabus expresses the knowledge the pupils shall have on completion of their studies.

The National Agency for Education also has the task of following up and evaluating whether the goals laid down by the State are actually achieved. This is done through inter alia local reports, research etc.

The municipalities have the responsibility for carrying out all activities in the school for which they are the mandators, i.e. that schools are built and

equipped, teachers and other school staff are hired, municipal funds are allocated for school activities, in fact all that makes it possible to achieve the goals laid down for the schools. The State gives general financial support to the municipalities without earmarking funds for specific public activity sectors. The State no longer exerts any influence on the way in which school activities are organized.

There are also schools with mandators other than the municipalities. They will be mentioned more fully later in the paper.

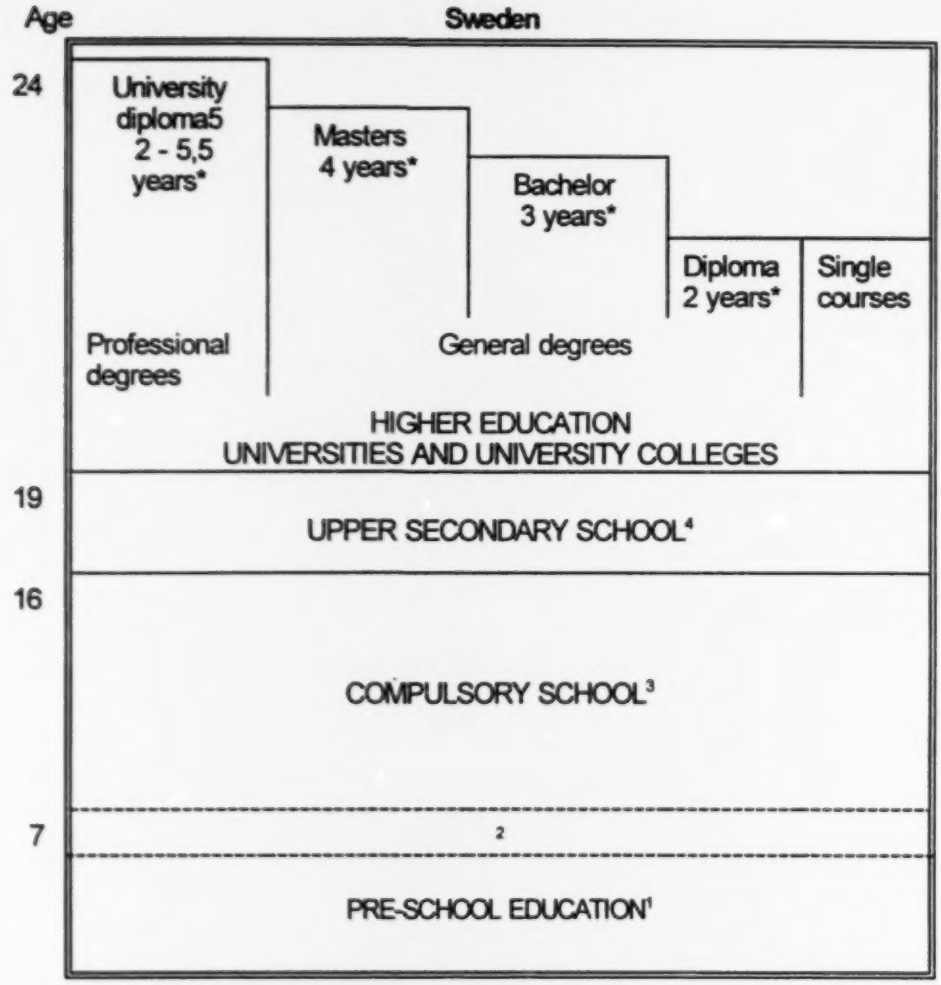
In order to understand and discuss coherence in Sweden

* between different stages of education, from compulsory education, through upper secondary education to adult education

* between what is in other countries called education and training

* between schools, social partners, enterprises when it comes to vocational training,

it is advisable to start this paper with an overview of the educational system in Sweden. A description of pre-school education is to be found in appendix 1.



[1] In pre-school education there are several institutions catering for the 0 to 6/7 year age range; day care centres, part-time groups and open pre-school.

[2] Since 1991 children have a right to start school at the age of six years, if their parents so desire, and if the municipality has the capacity to provide this opportunity. The option should be available in all municipalities by the school year 1997/98.

[3] The compulsory school is attended by children aged 6/7 - 16 years. It is a comprehensive, co-educational school designed to accomodate all members of the rising generation. Since the introduction of the 9-year compulsory school in 1962 the compulsory school has been divided into 3-year levels: lower, intermediate and upper level. As from the school year 1995/96 a new curriculum, with nationwide validity, will be implemented in school years 1-7, in 1996/97 for year 8 and in 1997/98 year 9.

[4] In the new, comprehensive, upper secondary school system that was introduced in 1992, to be fully implemented in the beginning of the academic year 1995/96, all education is organised in study programmes of three years' duration. There are to be 16 nationally determined programmes, 14 of which are primarily vocationally oriented and two preparing primarily for university studies. All the programmes, however, have the same eight core subjects i.e. Swedish, English, civics, religious studies, mathematics, nature studies, sports and health studies, and aesthetic activities. In addition students take subjects which are specific to their programme.

[5] The professional degrees rewarded at universities and university colleges are obtained upon completion of programmes of varying lenght (2 - 2,5 years). The programmes lead to specific profession e.g. University Diploma in Medicin or in Educational for Upper Secondary School.

* Minimum requirements.

2 The Swedish school system

2. 1 Compulsory schooling

The main task of the nine-year compulsory school is to convey enduring knowledge and basic values, such as respect for human dignity, individual liberty and integrity and concern for those in adversity.

We are living in a changing world. Social development is increasing the demands made on children and young adults. Schools must transmit the basic values and provide a kind of ethical compass and moral competence for children and young adults. They must give the next generation a belief in a future which they can build on. Without basic skills such as reading, writing and arithmetic, no individual can cope with living in a modern society. Without a knowledge of history and religion, people lose their roots. The new compulsory school also stresses environmental issues, internationalization, languages – both mother tongue and foreign languages. The compulsory school in Sweden does not provide any vocational education.

Children start school in the Autumn of the year they become seven. The option of starting at six has been introduced, but as yet few pupils do. Just over 5 percent of first-year pupils in the Autumn of 1993 were six years or under. As of 1st of July 1997, it will be the duty of municipal authorities to provide places in school for all six-year olds.

The present compulsory school is divided into three levels, lower, intermediate and upper, each of them three years in duration. In December 1993 Parliament decided on a reform of the compulsory school, which will start being introduced in grades 1–7 of the school-year of 1995/96 and be fully introduced by 1997/98.

The new time schedule specifies a minimum guaranteed teaching time, divided between different subjects and groups of subjects. There is also time allotted to pupil and school electives. For the time schedule, see appendix 2.

Guaranteed teaching time means teacher-supervised instruction, which can include both traditional lessons and the completion by the pupils of tasks requiring, for example, visits to libraries, institutions, work-places or museums.

The new compulsory school will no longer be divided into levels. Schools, within the framework of the time schedule, will themselves decide the allocation of teaching time between the grades. The only restriction will be that imposed by the syllabi. The goals of the syllabi are stated as the goals which are to be achieved by the end of the fifth year of school and the goals which are to be achieved by the end of the ninth year. In this way the syllabi provide an opportunity for nationwide evaluation of school achievements after the fifth

year – a staging post which will assist teachers in planning their instruction. The basic skills of reading, writing and arithmetic shall be monitored earlier and it is the duty of the individual school to compare its results with the national goals.

Lapp children can receive education with an ethnic emphasis in Samic schools. This education corresponds to the first six years of compulsory basic school.

Special schools comprise ten grades for children who are deaf or with impaired hearing, or children with secondary disabilities. Children whose vision is impaired nowadays attend the basic compulsory school and special schools for these children are no longer needed.

The compulsory school for the intellectually handicapped comprises compulsory basic school and training school.

The number of independent compulsory schools has increased in recent years. In the school-year 1993/94 there were around 200. There are independent schools whose teaching is based on a religious faith, schools that have a specific pedagogical orientation – the most common being that represented by Montessori and Waldorf schools, schools which put particular emphasis on one or more foreign languages – e.g. Finnish – or schools which have been started as a result of the threatened closure of a municipal school in sparsely populated areas. Many independent schools choose to pursue traditional pedagogical approaches. There are also international schools intended primarily for children temporarily resident in Sweden.

Statistics 1992

Pupils	892 612
whereof	
Sami schools	121
Independent schools	9 946
School	4 826

2.2 Upper secondary education

The upper secondary school is non-compulsory. As there are very few opportunities for 16 year old persons with no schooling other than the compulsory school, to get a job, upper secondary education is in practice – though not formally – a necessity. The demands for good basic knowledge and for communicative and social competence are increasing in all fields. In contemporary society there are few "unqualified" professions. Being a citizen

of today's society calls for more knowledge and skills than the compulsory school can impart over nine years.

In 1992 more than 90 percent of all pupils attending compulsory basic school went on to upper secondary school, and nearly all complete their upper secondary schooling within four years. The number of pupils going directly from the compulsory school to the upper secondary school has increased over the past few years. In 1993, 97 % of pupils finishing compulsory school transferred directly to upper secondary school if individual programmes are included (see 2.2.1. If they are excluded the percentage is 92). The reason for the increase is twofold, the new School Act and the situation on the labour market.

Recent high rates of unemployment have increased the applications for all forms of non-compulsory education, including universities.

In late Spring 1991, Parliament decided on a Government Bill to strengthen the opportunities for young persons to continue to further education. The Swedish School Act describes it as follows:

All young persons, from the age of 16 to the Spring term in the year they become 20 years old, have a right to upper secondary education. The municipalities also have the obligation to organize their upper secondary education in accordance with the wishes of young persons. This is important for the motivation of pupils to study. On the labour market, the decisive factor is not the orientation of the studies but rather that a pupil has been able to follow an upper secondary school education.

Most municipalities will not be able to offer all possible choices. The municipality, where the young person lives, is obliged to provide upper secondary education in its own schools, or by agreement in another municipality, in schools monitored by the county council, or in an independent school – all at the expense of the home municipality.

These rights do not apply to persons who have already completed an upper secondary education or to persons more than 20 years of age.

2.2.1 Upper secondary school

The upper secondary school in Sweden is currently going through a vital process of change.

The former upper secondary school, now being phased out, consists of some 500 different lines and special courses of study. Those leading to higher education at universities and university colleges were three years in duration, whilst the vocationally oriented were mostly two years. There exist a large number of vocationally oriented "lines" of study (so called special courses) of

different duration, some of them with age or other admission requirements. The former upper secondary school could be mistaken for a type of school, which gives pupils a very wide range of choice. In fact, it is a rigid system – once in a line of study, there are few opportunities to change or make individual choices.

In the Autumn of 1992 the new three-year upper secondary school began to be introduced, gradually replacing the former upper secondary school. By the Autumn of 1995 all first-year pupils in the upper secondary school will start in the new type of school.

There are 16 national programmes to choose from. Of these two (Natural sciences and Social sciences are primarily preparatory for higher education, 13 are primarily vocationally oriented and the 16th programme is the Arts programme. All 16 programmes are three years in duration, provide a broad-based education and formally confer general eligibility for further studies at post-secondary level.

Most programmes are divided into various branches that pupils choose to study from the second year onwards. Specialization is also provided through different courses, especially where there are no branches. Not all schools or municipalities offer all programmes or branches or courses. There may also be local branches.

NATIONAL PROGRAMMES AND BRANCHES

ARTS PROGRAMME
- * Art and design
- * Dance and theatre
- * Music

BUILDING AND CONSTRUCTION PROGRAMME
- * Building and heavy engineering
- * House painting

BUSINESS AND ADMINISTRATION PROGRAMME

CHILD RECREATION PROGRAMME

ELECTRICAL ENGINEERING PROGRAMME
- * Automation
- * Electronics
- * Installation

ENERGY PROGRAMME

* Energy
* Heating, ventilation and plumbing
* Shipping technology

FOOD PROGRAMME

* Baking and pastry making
* Fresh and cured meat products

HANDICRAFT PROGRAMME

HEALTH CARE AND NURSING PROGRAMME

* Dental nursing
* Health care

HOTEL, RESTAURANT AND CATERING PROGRAMME

* Catering
* Hotel
* Large scale catering

INDUSTRY PROGRAMME

* Industry
* Process
* Textiles and garments
* Wood

SOCIAL SCIENCE PROGRAMME

* Economics
* Liberal Arts
* Social Sciences

MEDIA PROGRAMME

* Information and advertising
* Printed media

NATURAL RESOURCE USE PROGRAMME

NATURAL SCIENCE PROGRAMME

* Natural sciences
* Technology

VEHICLE ENGINEERING PROGRAMME

* Aircraft maintenance
* Body work
* Repairs
* Transport

All national programmes include the following eight core subjects:

Swedish
English
Mathematics
Civics
Religious education
General science
Physical education
Arts activities.

The core subjects cover approximately one third of the minimum teaching time.

10–12 percent of the time is divided between three activities, i.e.

* individually chosen subject or subjects, e.g. another foreign language or other subjects given in one of the programmes in the municipality,
* local supplement or practical work related to subjects in the programme; this facility can be used by schools to increase the time for subjects within a programme, locally determined subjects or subject-related work experience,
* special project, which is an exploratory task, often resulting in a written assignment.

The rest of the time (approx. 50–60 %) is spent on the subjects specific to a programme. In Natural sciences there are among the other scientific subjects a lot more mathematics than is included in the core subject of mathematics. In Liberal arts the pupils study two or three more foreign languages in addition to English. In the vocationally oriented programmes pupils focus on vocational subjects. The pupils are often given a number of vocational choices within the programme.

Subjects of a more substantial length will be broken down into courses, each of them having a specific content, to be chosen and studied, and marked upon completion of the course.

In the vocationally oriented programmes at least 15 percent of the teaching must be located at a place of work. Only vocational subjects can be taught at places of work (see sec. 5.2).

Individual programmes

It is be possible for those who do not wish to go into a national programme to draw up their own individual programme. Individual programmes are usually a way for a young boy or girl to find out what he or she wants to do. These programmes can vary in length and have very varied contents. They may also compensate for a lack of knowledge in some subjects needed for further education in a national programme.

Specially designed programmes

These can be designed by an individual pupil or by the municipality for a number of pupils. The specially designed programmes are equivalent to the national programmes but offer more flexibility. They are three years in duration, formally conferring general eligibility for further studies at post-secondary level and they have the same core subjects as the national programmes. The rest of the time can include combinations from both theoretical and vocational subjects from two or more national programmes.

The education and training of young people thus develops along a less rigid and more course-based direction (see below sec. 3.2)

2.2.2 Apprenticeship training

Within the framework of the new upper secondary school, a new type of education is being created for apprentices. This education has the form of an individual educational programme for young persons whose main goal is to start working in the immediate future. For these young people, vocational education programmes may be too theoretically oriented.

The new apprenticeship training system is a combination of vocational training organized by a company within the framework of an employment relationship together with studies of certain subjects at the upper secondary school. As a result responsibility for apprenticeship training is shared by the company and the school.

The company is responsible for organizing and implementing that part of the apprenticeship training that takes place within the company. The apprentices' employment relationship during the time they are in a company is a question for the organizations on the labour market to agree on.

The School Act stipulates that the school is responsible for the core subjects. In the apprenticeship training these are Swedish, English, Religion, Civics and Mathematics. This part is the responsibility of the municipality. Pupils have the right if they want to take more subjects than the ones mentioned.

2.2.3 Special upper secondary school

For young persons unable to attend upper secondary school because they are intellectually handicapped, there is the special upper secondary school. This school is also currently undergoing reform.

The special upper secondary school is being modelled on the upper secondary school. Vocational national programmes are adapted for this school form and

there are also individual programmes for vocational training and activity training. Specially designed programmes can also be arranged.

The special upper secondary school is four years in duration.

2.2.4 Independent upper secondary schools

Independent schools above the compulsory level are divided into two categories, independent upper secondary schools and supplementary schools.

Education at independent upper secondary schools corresponds to that provided in upper secondary schools within the public education sector. An independent upper secondary school is entitled to a municipal grant, providing it fulfils certain requirements in terms of quality and teaching competence. The education shall be objective and comprehensive and admission requirements shall be such that the school is in principle open to all. If a pupil chooses to attend such a school rather than a municipal upper secondary school, the pupil's home municipality is obliged to provide the school with a grant providing the pupil has a right to an upper secondary education.

A supplementary school is an independent school providing education not available at an upper secondary school. This could be education that is not three years in duration, education that has a different orientation or education that imposes demands on some specific knowledge or work experience. A supplementary school is subject to State supervision and those regarded as being especially important in this category may receive State grants.

Statistics 1992

Schools	587
whereof	
independent schools	69
Pupils	310 271
whereof	
municipal schools	276 269
county council schools	28 780
independent schools	5 222

2.3 Adult education

2.3.1 Public adult education

Public adult education is regulated under the School Act and is a part of the school system in Sweden. Public adult education comprises municipal adult education, adult education for the intellectually handicapped and basic Swedish language instruction for immigrants. As is the case with youth education, responsibility for this part of the education system rests with the municipalities.

Public adult education in Sweden has the following aims:

* to bridge education gaps and thus work for increased equality and social justice

* to increase the pupil's ability to understand, critically examine and participate in cultural, social and political life and thereby contribute to the development of a democratic society

* to educate adults for a range of work tasks, contribute to change in working life and the achievement of full employment, thus supporting development and progress in society and

* to satisfy the individual desires of adults for broader study and education opportunities and give them the opportunity to supplement their upper secondary education.

Municipal adult education has existed since 1968. As of 1992/93 it includes basic adult education, upper secondary adult education and supplementary education for adults.

Studies within municipal adult education lead to formal qualification in individual subjects or to the equivalent of a complete leaving certificate from the compulsory and/or the upper secondary school. Education is organized in the form of separate courses, which should be arranged in such a way that students can combine their studies with employment. The students are free to choose their own study programme and they can also combine studies at basic and upper secondary level. There are no entrance requirements or leaving examinations.

Basic adult education confers knowledge and skills equivalent to those conferred by the compulsory school. Basic adult education is a right for the citizen and is mandatory for the municipalities.

Upper secondary adult education confers knowledge and skills equivalent to those conferred by youth education at upper secondary level. It can offer the same programmes and subjects (with the exception of arts and sports) as the

upper secondary school. There is no entitlement to upper secondary education for persons above 20 years of age, but the municipalities are obliged to make an effort to provide educational opportunities corresponding to demand and individual needs.

The purpose of **supplementary adult education** is to provide vocational courses which are not available in the youth sector. These courses lead to higher professional competence or to competence in a new profession.

Adult education for the mentally retarded corresponds to the instruction provided for mentally retarded children in compulsory school and to vocational education in upper secondary school for mentally retarded. Education is organized in the form of separate courses. The municipalities are obliged to make an effort to provide educational opportunities corresponding to demand and individual needs.

Swedish language instruction for adult immigrants is provided by the municipalities. It comprises, on average, 525 hours.

2.3.2 National schools for adults

There are two State run schools for adults. Instruction in these schools is partly or entirely by correspondence. Participants are recruited from all over the country and the schools cater above all for students who for various reasons are unable to attend courses within municipal adult education.

2.3.3 Advanced vocational training

A Government Bill was presented to Parliament in the Spring of 1994 containing a proposal for establishing a post-upper secondary form of education that should be vocational and not academic in its orientation. A commission is now working to investigate the different sorts of efforts needed to further the establishment of this kind of education (see sec. 7).

2.3.4 Popular education

Folk high school is Sweden's oldest form of adult education. The first folk high school was founded in 1868 as a means of providing a landed agrarian class with the education it needed to discharge various public responsibilities.

There are 132 folk high schools in Sweden. About half of them are run by popular movements, such as the labour movement, the temperance movement and various free church denominations. The others are operated by municipalities and county councils. In all cases the bulk of expenditure is covered by State grants.

Folk high schools enjoy extensive powers of self-determination as regards the direction and content of tuition. They organize long-term courses which can last for several terms and also short-term courses lasting for a few days or weeks. Some long-term courses qualify for entry to university studies.

The long-term courses mostly confer general education but also some sorts of vocational education, e.g. for professions within media, leisure and arts. The vocational education at folk high schools used to recruit mostly young persons, the average age being 19–22 years. The students are older nowadays, a development which has been particularly strong the last few years. The average age of students is now 30–40 years old.

The short courses have expanded enormously the last decade. The folk high school is the form of school that has the largest number of courses for handicapped, e.g. adjustment courses for persons who become handicapped as grown-ups.

Candidates for folk high school must be at least 18 years old and have completed compulsory schooling. Folk high schools are often organized on a residential basis, with the students living in school.

Study circle activities

Sweden has a number of nation-wide adult education associations whose activities principally comprise study circles, though they also engage in cultural activities.

There are 11 adult education associations which qualify for State grants. The largest of these is the Workers´ Educational Association (ABF), which accounts for one-third of all activities. ABF belongs to the labour movement. Other adult educational associations are affiliated to political or trade union movements or to popular movements, such as the free churches or the temperance movement.

The study circles do not confer any formal competence.

Apart from study circles for pensioners the study circles are usually organized in the evenings to facilitate studies alongside work. There are such a large number of participants, reaching more than 25 % of the adult population, that Sweden has been called "a study circle democracy".

3 Coherence in the Swedish educational system

The reform of the Swedish school system aims at establishing a new culture in education as a whole, and between education and its consumers. The tradition

is that every level of education looks upon the level below as a supplier, providing young people in the appropriate quantity, at the appropriate time and with the appropriate competence.

The political ambition is that upper secondary school shall take a greater responsibility for information and development with respect to the compulsory school. Likewise, quality and outcome of the upper secondary school must be a matter of interest also for universities and colleges as well as for working life. Thus, the upper secondary school must listen to and rapidly adapt itself to the signals from the labour market and higher education, concerning changing needs for competence and recruitment.

There is an outspoken ambition to do away with yesterday's clearly marked barriers between different types of education. The political ambition is that schools, i.e. head teachers and teachers, will co-operate in order to improve the educational opportunities and success of the pupils. There is also a marked ambition to encourage contacts and if possible co-operation between schools and companies and other future employers.

3.1 The same fundamental values

An example of the formal barriers which existed was that each form of school had its own curriculum.

Parliament decided in December 1993 that all forms of compulsory education shall have the same curriculum and that all forms of non-compulsory education shall have the same curriculum. The two curricula were issued on the same day (February 17th 1994) and are to some extent identical. The fundamental values which all school work shall be based upon and which every pupil shall be taught are identical for all school activities, from the compulsory school up to public adult education.

There are also great similarities in the curricula sections on Norms and values, Responsibility and influence of Pupils and on Responsibility of the head teacher. The differences which do exist can be explained by the different tasks that schools for children and schools for young persons and adults have.

The curriculum for the non-compulsory schools applies to upper secondary school, municipal adult education and other non-compulsory forms of schooling. There are in the curriculum some specific goals set out for each type of school. This is, however, the minor part of the curriculum – the rest sets the same goals and guidelines for all upper secondary education and public adult education.

Schools that are meant to co-operate must have the same basic set of values and as far as possible the same goals and guidelines.

3.2 The same syllabi and course-based organization

Upper secondary education and public adult education also have the same syllabi. Co-operation between these different types of school will as a result be enhanced. The new syllabi set up goals to achieve (minimum standards of knowledge). Those pupils that do not attain the minimum standards can prolong their studies.

As was briefly mentioned (2.2.1) the upper secondary school is now developing in a more course-based direction. This will make the upper secondary school more like municipal adult education.

Municipal adult education has always been course-based in order to provide a wide range of choices. Adults have varying needs according to earlier schooling, work experience and plans for the future. Some need to learn more to manage their present tasks, some want to change to a more advanced job. Some need to study only one subject, some need to improve their knowledge in more or less all subjects. Some can study in the day-time, some can only study in the evenings alongside job and family obligations. Municipal adult education was from the start meant to respond to all these different needs. Teaching is organized in courses (modules), giving the students the opportunity of choosing both pace and extent of their study programmes.

The upper secondary school has on the other hand a tradition where all pupils study at the same speed and – in the chosen line of study – the same subjects. The only choice the pupils had in the old upper secondary school was before entering a line of study or a special course. After entry the opportunities for making individual choices were small. In the new upper secondary school, there is, as described in section 2.2.1, a larger share of time set aside for individual choices. By a wide margin the largest range of choice is given the pupils in the course-based school within a specially designed programme. The eight core subjects take about one third of the time but the rest can be put together according to the individual choices of the pupil – provided that the actual subject and course is given in the municipality in question. The regular upper secondary school is three years in duration. In the course-based school the pupil can take more or less time to finish his or her programme. It must, though, be of the same extent and quality as the national programmes.

The advantages of making the upper secondary school more course-oriented include the following:

* it offers opportunities to renew education in step with the changing needs of working life by substituting or updating courses (modules)
* it allows municipalities to focus their education to meet local needs
* it is possible to create education with a more clearly defined vocational orientation than the national programmes and branches provide
* it allows pupils to influence their own education more

* it allows pupils to combine vocational courses with courses preparatory for further studies and to create their own study programmes based on individual choice
* it allows pupils to go more slowly or more quickly through the upper secondary school than the normal three years
* it allows pupils to start their studies at their own level of competence, which makes the link with compulsory school easier.

It must be stated here, that ultimately it is the municipality which decides how many options there may be for a pupil to choose from. The municipalities are supposed to consider the wishes of the young persons living in the municipality. Very many options, each of them chosen by a small number of pupils, is however costly. Sudden changes in volume can cause too great a strain, in particular where vocational programmes are concerned. They require special premises, expensive equipment or special competence. The supply of staff for nationally important areas of occupation must also be taken into consideration. From 1994 onwards, head teachers can sign agreements for education in certain subjects (economics, art, technical and vocational subjects) to be carried out by a contractor, either in person or a body corporate.

A committee follows the development of the course-based school. On the initiative of Parliament, a committee has been appointed – consisting of members from all the parties in Parliament – with the task of following the development of the upper secondary school.

As the upper secondary school moves in the direction of the more course-based school, it will be possible to realize what has long been on the political agenda, namely closer co-operation between the upper secondary school and upper secondary adult education in the municipalities. The two school forms are both needed and they are not meant to be united. However, this has been, and still is, the fear of people working in adult education. What politicians want is a more effective education giving a larger amount of choices to pupils at the same cost. With a similar organisation pupils of one school form can take a course in the other.

There are also other interesting examples of initiatives taken to overcome the barriers between different forms of education, which will be discussed later (sec.10)

The present situation of municipal adult education, especially upper secondary education for adults and supplementary adult education will be commented on later (sec.6).

3.3 The transition from compulsory school to upper secondary school and the coherence between the two

As has been stated earlier (sec. 2.2) upper secondary school is in reality if not formally, a compulsory school in the sense that there are practically no other options for young persons leaving compulsory school.

Attempts are made in a variety of ways to facilitate the transfer from compulsory to upper secondary school. In many municipalities, pupils are given an opportunity, at an early stage during their compulsory schooling, to visit upper secondary school and find out what goes on there. Headmasters, teachers, Syo (guidance) staff and pupils at the upper secondary school inform the compulsory school pupils about the courses of study and other matters. In addition to this general information, pupils who want to can individually consult Syo staff about their choices at upper secondary school.

Earlier studies (Statistics Sweden, SCB) have shown that the educational and socio-economic background of parents is very important when it comes to pupil's choosing a line of study at the upper secondary school. Young people whose parents had a profession demanding long education also chose long theoretical lines of study preparing for further studies. Young people whose parents had a shorter education tended to choose vocational lines. The study by SCB of pupils finishing school in 1988 shows that 66 % of the pupils who did not continue studies directly after compulsory school had parents who were skilled workers, unskilled workers or lower grade office workers.

In a survey[1] concerning the effects of student aid on students attending the upper secondary school in the municipality of Östersund, the significance of student aid in the transition period has been studied. Student aid at upper secondary level did not have a strong overall effect on recruitment to the upper secondary school for the children from families with medium or high incomes. Student aid had the strongest effect on children from families with low incomes. Thus the aid did have a selective effect on recruitment to the upper secondary school. The survey also came to the conclusion that student aid had somewhat reduced the importance of parental income and educational background on the choice of study line/study programme.

There are of course also interrelations between the results, as shown in the certificate, from the compulsory school and the willingness to apply for upper-secondary school.

There also used to be a correspondence between results and what line of study pupils applied for. There is a connection between the choice in the compulsory

[1] Social bakgrund. Studiestöd och övergång till högre studier. Reuterberg, Svensson. SOU 1992:122

school of a course in Mathematics and English (where there exists a general and a special, more advanced course in both subjects) and the choice of study at the upper secondary school.

Not surprising is that the lack of a complete leaving certificate from the compulsory school influences pupils' further education. The proportion of pupils finishing compulsory school with incomplete leaving certificates has remained fairly stable in recent years, being in 1992/93 4.7 % who lack a certificate in one or more subjects and 2.7 % who lack a certificate in two or more subjects. There are relatively large differences between different types of municipality. Incomplete leaving certificates from compulsory school were most common in large urban areas. In rural areas this was comparatively rare.

There were 158,890 applicants to upper secondary school the Autumn term 1992. 132,170 were accepted, on the average 64.5 % of them on the line or course of study they had chosen in the first place. The share varied between 61 and 91 % in different municipalities.

As the new upper secondary school was introduced on a larger scale (and the situation in the labour market deteriorated) the proportion of pupils going directly from compulsory school to upper secondary school increased from 92 % in 1992 to 97 % the following year.

According to the SCB survey of pupils starting their upper secondary school studies later than one term after leaving compulsory school, two in every ten interrupted their studies. This figure is considerably higher than the average of all pupils.

In the traditional school there were few contacts between the teachers in compulsory school and teachers in the upper secondary school. The results of this lack in contacts could be that pupils encounter too high expectations from their new teachers or they have to repeat what they already learnt in compulsory school. Both are equally unsatisfactory.

In the reform of the compulsory and non-compulsory school, special efforts are made to bridge this lack in contacts. There is a great correspondence between the curricula, giving the school forms the same basis in terms of fundamental values. Efforts are being made to give a new dimension to the syllabi of those subjects that are taught in both the compulsory and the upper secondary school. They are meant to be written from the perspective of the pupil's learning through the 12 years from grade 1 of compulsory school to the last year of upper secondary education.

The course-based organization, which is now developing in the upper secondary school will make it easier to organize the teaching to fit the level of different pupils. This is meant to give the pupils better opportunities for realizing their educational dreams.

There will be, though, a barrier. Pupils will have to have at least a Pass in the most important subjects from the compulsory school, i.e. Swedish, English and Mathematics, to go directly to a national or a specially designed programme in the upper secondary school. The pupils that do not have at least a Pass have to start upper secondary school by going through an individual programme, where they can repair their lack of knowledge.

4 The strategy for the reform of upper secondary school and the coherence between "education and training"

The upper secondary school used to be strictly planned by the State. The total number of places and their distribution in terms of labour market sector were decided by the State – for the whole country and for each municipality. Not all municipalities were allowed to have an upper secondary school.

It turned out to be very hard to adjust these plans to the needs of the labour market four or five years ahead. It was equally difficult to make the municipalities adjust their supply of education to these needs. The State could not force the municipalities to arrange a certain kind of education, only encourage municipalities in a number of different ways.

As the labour market turned out to have very few jobs for young persons coming directly from compulsory school without further training, the upper secondary school became if not formally, at least in practice a compulsory school.

The great challenges then for the politicians when moulding the new upper secondary school were:

* to make young people really want to go on to upper secondary school, even if they would rather have a job

* to make the municipalities adapt their organization to the number and the wishes of their young inhabitants.

The solution was to make the municipalities, as laid down in the School Act, see to it that all their inhabitants up to the Spring term they are 20, start an upper secondary education (if they do not already have one). And the municipalities shall take care to arrange the sort of education that young persons are interested in.

The reasoning behind this was the following.

First. There was research showing that many more pupils stayed on and fulfilled their upper secondary education if they were allowed to go on the particular line of study which they most preferred. If they were forced into a line of study chosen as the third or fourth alternative, they were much more likely to drop out of school.

Secondly. Coherence between vocational study and the chosen profession was weak – and growing weaker all the time. One example showed that barely one in every three persons entering the vehicle engineering line of study worked in that sector of the labour market four years later. The same data from the food and restaurant sectors showed that every second person remained.

It can be discussed whether this is an advantage or not. The conclusion was that the best thing was to get as many young persons as possible to go through upper secondary education. And the best thing is to let them choose what line of study they want. Young persons are usually sensible, they choose what they are good at.

Even if this principle of freedom of choice was much cared for, both by the Social Democratic Government at that time and by the Conservative Government that followed October 1991 – September 1994, it is nevertheless a great problem that pupils do not choose as the labour market would like them to.

The proportion of pupils going to the theoretical lines of study leading to university or university colleges increased step by step from the 1970s to the 1990s. During the last few years, however, this share has diminished. In 1989 49 % of pupils entered the three or four year theoretical lines of study, usually leading to university studies. During the Autumn term of 1993 38.7 % of pupils entered programmes preparing directly for further studies (Natural sciences and Social sciences programmes).

Particularly worrying is that the proportion of pupils going to Natural Sciences has diminished. If this trend can not be broken, there will be far too few masters of engineering. The State is making a number of efforts to encourage pupils' interest in technology and science right through the school system.

Originally, vocational education in Sweden was carried out as apprenticeship training directly at a workplace. Apprenticeship training outside the upper secondary system still exists within a very limited number of professions. Earlier the most frequent form of vocational education consisted of 17 two-year lines and over 500 special courses of varying length. The large number of exits led to small groups of pupils and high costs per pupil. More importantly, it led to a relatively high degree of specialization, which had its drawbacks.

Reform and modernization of vocationally oriented education in the upper secondary school was long regarded as necessary. The goal of the reform was

to strike a balance between the need to limit the number of study options and the need to have an appropriate vocational orientation.

It was considered important to eliminate the boundaries that have traditionally separated vocational and academic studies. These boundaries are vanishing in working life and being replaced by different organization of working structures. The labour market is always changing rapidly. Many of those professions that are expanding the most today were not known some decades ago. Likewise, to-day's upper secondary school is facing the challenge of trying to educate people for as yet unknown occupations in a future that is hardly perceptible.

In the future more people will change their work and professions and will consequently need to renew their competence throughout their active working life. This requires, to an increasing extent, knowledge which has a permanent value quite irrespective of future profession and employment. It was also considered necessary to give vocational education the same status as the theoretical upper secondary education.

Vocational education was integrated into the ordinary upper secondary school and the number of general subjects in vocational education was increased. This was necessary in order to give also pupils from vocational programmes access to academic studies. The most important reason for an increase in the number of general subjects in upper secondary school was the demands of the labour market for higher qualifications.

In both industry and service sectors the tasks of personnel are widening. The boundaries between workers and employees are vague and the specialized division of tasks is disappearing in expanding firms. In industry tasks are computerised and production is more flexible and different items are made to fit the needs of each client. (See appendix 3 for a short description of the labour market and its need for competence around 1900, 1950 and 1995).

This development calls for personnel with new competence. At the same time it becomes increasingly important to "learn how to learn" in order to create opportunities for continuously renewing and supplementing competence. This is the essential component of life-long learning.

Competence of the individual will be emphasised in the future. Personal suitability becomes an important part of vocational competence. This includes the ability to co-operate, work in a team and communicate both in Swedish and a foreign language.

The basic concept of the reform of the upper secondary school is that it shall take into account both the individual's right to freedom of choice and society's need for a school that can be adjusted to rapidly changing external conditions in the surrounding world. One part of this concept is the course-based organization of teaching.

The solution that was chosen for the vocational programmes in the upper secondary school was to enlarge the proportion of general education, i.e. subjects such as mathematics, mother tongue, English and Civics, thereby giving young persons a better preparation for a changing working life. This means that a student from the reformed vocational education is more of a generalist than a specialist. Specialisation will be a matter for the future employer. Education should not be a vocational dead end but the first step along a journey of life-long learning.

This fact is accepted and approved of by the parties on the labour market. Many small and medium-sized enterprises, however, regard this as a problem because the student can not be put into production immediately. Specialisation is thus becoming an important cost for the company.

This vocational education shall be built up on the basis of co-operation between the school and working life. At least 15 % of the students' total time for the vocational national programmes will be spent at a workplace (see sec. 5.2).

In the evaluations of upper secondary school education carried out in the 1970s and 1980s, pupils completing study lines with a vocational orientation consistently expressed their satisfaction with the education they had received. The vocational side of the education had given the pupils self-confidence, a sense of "being able to do something". Pupils at upper secondary school on the lines preparing for further studies were generally not as satisfied with their education.

The reformed vocational education could develop into a more formal and "abstract" education. If all pupils are to be able to benefit from an education with more general subjects, then schools must be capable of making the more theoretical education meaningful and realistic, and also of making the relationship between the practical and the theoretical parts work very much better than at present. Failing this, there is a risk that more pupils will go through school without assimilating knowledge and that the drop-out rate and interruptions in studies will increase.

5 Coherence between school and working life

The Swedish principle is that basic schooling shall take place in school.

Compulsory school is completely integrated in the sense that no differentiation is made in the study orientation throughout these nine school years. The main principle of non-differentiation has been in operation since the end of the 1960s.

Nearly all basic schooling at upper secondary level, i.e. for the ages 16–19, takes place in school. This includes vocational education. Still, the interplay with working life is very important.

The increase in general subjects in vocational education in upper secondary education has led to a prolongation of vocational education from two to three years.

The "establishment period" of young persons, already longer than in earlier generations, is thus becoming even longer. Several events or processes tend to occur later in life, such as entry into the job market, earning an independent income, moving out of the parental home, setting up a residence of one's own and building a family.

As a result of the longer establishment period, an increasing number of young people find themselves in a sort of intermediate stage, between childhood and independent adulthood. This has led to the formation of a better educated, older and ever larger segment of young people whose material standard of living is steadily falling behind that of older citizens.[2]

There is, however, another study[3] showing that a fairly large number of young persons work in their spare time while attending upper secondary school. Their studies, according to their own views, have not been unfavourably influenced by their work. The most frequent reason for working was to get money for their personal life as a teenager, i.e. for clothes and spare time activities.

As the questions in the study were answered before the recession, there is reason to believe that these attitudes have changed during the last few years.

5.1 Co-operation between the compulsory school and working life

The work experience programme (Prao) has existed for some time in Swedish compulsory schools. Previously, there were national regulations requiring pupils to spend six to ten weeks of their compulsory school time at workplaces. It was common to take at least four of those weeks during the last three years of compulsory school. The purpose of Prao is to enable pupils to gain first-hand experience of working life and to form an opinion of different kinds of occupations and working environments.

[2] Living conditions, values and attitudes of young adults in Sweden, a report by Joachim Vogel, Statistics Sweden

[3] Erik Wallin and Rune Axelsson; Övergång skola – arbetsliv (Transition to work) University of Upsala, Dep. of Educ. 1994. Mimeo

Through study and vocational guidance (Syo), pupils can get information to help them with their choice of studies and career. According to the new curricula, the head teacher has a special responsibility for co-operation with working life outside the school and for organising the study and vocational guidance scheme. This scheme aims to assist pupils with the various options offered by the school and with their choice of further studies and occupation.

There are now no longer any national regulations concerning the scope and organisation of Prao and Syo. It is up to the local authority and the school itself to determine in detail how these schemes can best be incorporated into the school's total activities. Today, most schools have special Syo staff working with information and guidance for pupils and parents.

5.2 Co-operation between the upper secondary school and working life

Ever since the end of the 1970s, special local bodies have been set up in the municipalities for co-operation between school and working life. During the 1980s, the municipalities were obliged to establish such bodies, called SSA councils, which brought together representatives from the two sides of the labour market and advised the local school board. It is now no longer mandatory to have such bodies.

At the beginning of 1994, there were SSA councils in 38% of Sweden's municipalities. One year earlier there were SSA councils, or their equivalent, in almost half of the municipalities in the country.

In 176 of the country's 286 municipalities (62%), there are what is known as vocational councils or programme councils. Here, co-operation between the school and local trade and industry is fostered by planning, for example, the workplace training. Larger purchases of equipment such as numerically-controlled machine tools are discussed and the school receives good advice about the teaching by professionals outside the school.

In 172 municipalities, there were at the beginning of 1994 also other kinds of joint action between the voluntary school forms and working life. These include business councils, reference groups and informal networks, foster companies, business seminars and conferences, also of great help when it comes to establishing contacts between school and working life.

The training of supervisors, which should precede workplace training, is also often discussed and planned in the vocational and programme councils.

The State, municipality and working life, all have a common responsibility for the contents of vocational education. With the new upper secondary school having a greater proportion of vocational training taking place externally in

companies, it will be necessary to develop contacts between the school and working life even more.

Companies and other workplaces are expected to play an important role in education by offering part of the vocational training even though the main part of the upper secondary education takes place in the school.

In all the 13 national programmes that are vocationally oriented, workplace training (APU) is included. This is a syllabus-guided training carried out at a workplace outside the school. APU must correspond to at least 15% of the total teaching time on the programme. Only vocational courses may be transferred to a workplace. It is locally decided which parts of these courses are to be located at a workplace. The board of the school is responsible for supplying workplaces and for seeing that APU meets the demands placed on the training. The advisory bodies for co-operation between schools and local trade and industry, vocational councils or programme councils, are very important in planning such items as the provision of training, the purchase of equipment, APU and the training of supervisors.

Workplace training requires close co-operation between the school and the workplace. School mandators are responsible for the procurement of training opportunities and for supervision of the pupils during their workplace training. During this part of their education the pupils have a purely student status. Supervisors from the company play an important role in evaluating the performance of pupils.

Through this training, pupils come into direct contact with working life. They are trained on machines and equipment which, because of the costs, are not available at school. They also come into direct contact with companies, which may want to employ them. For the companies this participation in workplace training allows them to influence the content, planning and implementation of the training and also to form an opinion of the individuals they may want to see as future employees.

Due to the situation on the labour market and discussions between the municipalities and the workplaces on the financial compensation to the workplaces, there has been a shortage of places for APU. Labour market policy measures has also to a certain extent pushed out APU. The Swedish Association of Local Authorities and Swedish Employers' Confederation have recently come to an agreement on the APU, which is why there is reason to believe in an increase in the number of places.

In the Natural Sciences programme, the Social Sciences programme and the Arts programme, the local supplement (see 2.2.1) may be used wholly or partly for subject-related work experience. The pupil spends time at a workplace and learns how one or more of the subjects included in his or her education are applied in working life. The experience the pupil gains from such periods at workplaces can have a motivating effect on the studies and also

provide an opportunity for practical application and an extension of learning. These practice periods may also be significant in the pupils' choice of occupation and for their chances of getting established on the labour market.

Within the framework of an individual programme, a pupil can combine employment aimed at vocational training with studies. Such apprenticeship training is spread over three school years and includes the core subjects Swedish, English, civics, religious studies and mathematics. If the pupil wishes, the education will cover all the core subjects.

Apprenticeship schemes play in practice, however, a marginal role today.

Training within a company has played a relatively small part over the last 20 years. Today, given the increasing need for both general and specific company skill process training, vocational training is re-emerging as one of the main instruments. At present there is an on-going debate in Sweden about how to find new ways of structuring this need for co-operation between the municipal educational authorities or the schools themselves and working life.

5.3 Example of integration

It is important to bring about education that is of high quality, relevant and integrated. One important initiative that has been taken in this area is the co-operation between a university college, an upper secondary school and Volvo in order to create a centre for Vehicle Engineering in the town of Skövde.

Volvo has always been deeply involved in the apprenticeship training system. Up to 1985, Volvo's apprenticeship program was of the conventional type, combining machining and mechanical maintenance. The education and training programs at Volvo have always attracted many students. About 20 % of the students have continued to higher technical education after completing Volvo's integrated upper secondary education programmes.

As a result of the ongoing reform of upper secondary education, Volvo is starting a specially designed programme. It is a combination of courses from the Natural Sciences, the Industrial and the Vehicle Engineering programmes. On top of this, the pupil is offered a period of apprenticeship training over the three years in the company.

There are also other Swedish companies that have now started their own integrated programmes at upper secondary level in order to emphasize the important mission of supplying the industry of tomorrow with a sufficient number of people with the required competence. Such an example is SKF, who are starting an independent technical upper secondary school. Pupils will study 40 hours a week, just as the ordinary working time.

6 Vocational education for adults

The OECD indicators in Education at a glance reports the educational attainment of the population in some 20 countries (1990/91)[4]. In Sweden a relatively large share of the young population (25–34 years of age) has at least upper secondary education (85 %). In the middle aged population (34–45), however, the percentage is lower and in the somewhat older generation (45–54) much lower in Sweden (61 %) than in e.g. United States (72 %), Norway (75 %) and Germany (79 %).

A report from Statistics Sweden shows the educational attainment for different ages in Sweden. Altogether 2.8 million persons between the ages of 25–64 years have an education shorter than what the pupils of to-day have a right to. 18 % (800 000 persons) of the population between 25–64 have less education than a nine year long compulsory school, of which 30 % did not have a job. 11 % of the 25–64 year old persons have only compulsory school, of which 25 % did not have a job. Nearly 2.5 million persons have an upper secondary education that is of at least two years in duration.

These statistics show formal education. Many persons may have educated themselves through popular education or through in-service training. Even so, there is a large education gap between generations in Sweden.

It has been said that about 80 % of the labour force by the year 2000 will already be in the labour market. The need for renewal of competence every year will then be 10–15 %. Young persons leaving education and entering the labour market will only be about 2 %. It is hard to do but easy to say that the renewal of competence must to a very large extent be brought about in persons already in the labour force.

Increasingly rapid technological development means that knowledge must be renewed and reviewed within many different areas. Education and training will be transformed from being solely an introduction for young persons to working life, into a life-long process of learning where the traditional system of education becomes responsible for just a part of life-long learning.

In a rapidly changing labour market, the feasibility of forecasting demand for different vocational categories becomes increasingly unrealistic. The fact that many future occupations and areas of activity may not yet have been conceived, underlines the importance of flexibility and the ability to change. In the future more people will change their work and professions and will consequently need to renew their competence throughout their active working life.

[4] OECD Paris 1993

Recurring education makes it possible for persons to supplement and to repair shortcomings in their earlier schooling. There are a number of choices for adults who need to renew their competence. There is formal or credential adult education, popular education and in-service training. A fourth type, including elements of both credential and personnel education, is labour market training. The different types of education have different mandators and the students have different conditions when it comes to study assistance or pay.

As has been described before popular education has a long history in Sweden. The great expansion of educational opportunities came at the end of the 1960s with the establishing of municipal adult education. The reasons were twofold, it was both a question of justice, of creating equivalent educational opportunities between the generations and a question of economic growth and the labour market.

In the late 1980s there was a large increase in in-service training, especially as it became possible to arrange commissioned education within municipal adult education and in the universities and university colleges.

The reasons for establishing formal adult education in the late 60s still apply, and it is interesting to see, that the Swedish Trade Union Confederation (LO) gives the same two motives for adult education as applied in the 1960s, i.e. financial motives and ideological/egalitarian motives. When it comes to financial motives, they do not differ much from those stated by the Government. There are some mentioned by LO[5].

1. Sweden must compete with high quality products with a high level of technology and knowledge.

2. The development of new technology in working life makes it necessary to keep quality high, flexible and appropriate for the customer. This calls for more abstract knowledge.

3. The young correspond to 2-3 % of the yearly renewal of competence in the labour force. With an accelerated development in technology the need is 10-15 %, which is a very demanding challenge for the existing labour force.

4. New models for the way production work is organized are needed in order to develop our human resources. On the job training increases competence and productivity. In a modern organization the mind and the hand work together. Technical skill and ability to solve problems are needed. 1.5 million persons do not have enough knowledge of Swedish, Mathematics, English and Civics.

Swedish legislation guarantees entitlement to educational leave without restriction as regards the duration or choice of studies. Employers cannot reject

[5] Vuxenutbildning och kompetensutveckling inför 2 000 talet. Vuxenutbildningens ABC.

such an application but have the right to postpone the studies for six months at most. A commission has suggested that the employees' rights be somewhat more restricted.

For unemployed persons there exists within labour market training a large number of different schemes, which will be described later (see sec. 8). Participants in labour market education programmes are entitled to special educational grants that do not have to be repaid. Labour market training schemes are all free of charge. All schemes are for people who are unemployed or run the risk of being unemployed.

Popular education is provided at very little charge or none at all as there are State subsidies. Public adult education is free of charge. Through the study assistance schemes, consisting partly of a small grant and partly of a larger loan or, for the educationally disadvantaged, special adult study assistance, the students can cover their personal expenses when they have leave of absence.

Many adults choose to strengthen their competence for work or social life by taking part in study circle activities, which do not entitle them to any kind of study assistance. Study circles do not confer any formal competence but are often used as a first step to formal studies for persons unsure of their studying abilities and who need supplementary competence within a certain area. Examples of subjects are foreign languages and computer courses.

Folk high schools and their vocational training is described above (sec. 2.6),

Municipal adult education plays an important role in giving a second chance to those who for some reason did not have or were not able to profit from upper secondary school education in their youth. Municipal adult education is planned and designed to suit adult needs. Vocational education exists within upper secondary adult education and supplementary adult education.

Municipal adult education had its peak in the mid 80s but has now diminished due to the recession. The municipalities are forced to give basic adult education to those who need and want it but do not have the same obligation when it comes to upper secondary adult education or supplementary adult education. As a result of this the municipalities have been much more restrictive in the last few years. Some trace a tendency for a more market oriented supply of municipal adult education to as early as in the late 80s.

The relevant question is, whether it still is possible to realize the goals of recurrent education. At the same time, there is an awareness both on the national political level and on the labour market that a well-educated working force is of vital importance for economic recovery. This is an important question for the new Social Democratic Government in power since the beginning of October 1994.

As has been mentioned earlier upper secondary adult education confers knowledge and skills equivalent to those conferred by the upper secondary school. Adult education can offer the same programmes and subjects (apart from arts and sports) as the upper secondary school. Supplementary adult education provides vocational courses which are not supplied to young persons. Supplementary adult education mostly leads to a higher competence than secondary education.

In 1993 a total of 140,650 persons (78,701 full-time students) studied in municipal adult education. This figure includes basic education for adults (27 %), which confers knowledge equivalent to that conferred by the compulsory school. 66 % studied in upper secondary adult education and 7 % in supplementary adult education.

In-service training

Personnel education and training or in-service training can be defined as education on the employers' terms and at his expense. The trade unions exert various degrees of influence but Sweden does not have any legislation governing entitlement to or influence on personnel education and training.

According to a survey in 1987 by Statistic Sweden more than one million persons or just over 25 percent of the employed population took part in some form of personnel education and training. The provision of in-service training varies according to the economic situation on the labour market.

According to a report by Statistics Sweden[6] every fourth person within the Swedish labour market was involved in some type of training, paid by the employer, during the first half of 1993. There were 46 666 000 hours of training or 5 833 000 days. As Sweden has about 1 600 working hours per person and year, the time for training was equivalent to 58 000 persons in continuous training.

There has, however, been a decrease in the volume of training, measured as number of days for training, by 47 % since 1990. Of the decrease in volume, 8 % was due to a decreased labour market, 28 % to a lower rate of participation and 11 % to a shorter length of training.

There are great differences between different categories of employees. The already well-educated received twice as much personnel education and training as others.

Women were more often involved in training than men. Part time workers had a shorter training and lower participation rate than full-time workers.

[6] Statistiska meddelanden U 39 SM 9401 Personalutbildning 1992 och 1993, Education and training of the labour force 1992 and 1993

Blue collar workers had a lower participation rate in education and training than white collar workers.

9 % of the labour force were immigrants, actually born abroad. These participated to a lesser extent in training than Swedes, 17 respectively 23 %. The explanation is that immigrants were more often occupied in a profession which had low activity in training.

There are great differences between different industries. Services as well as Finance and Insurance both had twice as high a rate of participation as Agriculture and Construction. Low rates were also found for Commerce, hotels and restaurants, and the category of Self-employed. Public employees, mainly the State/Government and Municipal employees, had a higher rate of participation than private ones.

Training was mostly carried out as in-house training. 33% were trained by someone outside their own company. 27 000 participants had had their training at college or university, which was a reduction of 51 % compared to 1990.

There have been discussions in Sweden on different means for providing further education for the working force, by e g legislation, individual funds for employees or tax reduction for the employers.

The employees´ organizations are usually in favour of such means in order to get a better balance in participation between blue and white collar workers.

The opinion of the Swedish Employers´ Confederation is on the other hand that education and training is organized in so many different ways - the most frequent being on-the-job training, for which the employers already pay. Everybody needs more general education as a basis for development of the society, of the labour market and of the individual. The Confederation questions whether employers should pay for this.

7 Agenda 2000

The former Minister of Education and Science initiated extensive work with the aim of focusing on the vital issues relating to competence. The ambition was to stimulate a discussion on what competence is required for the future, and how this can be satisfied. This work, run under the project "Agenda 2000 - Knowledge and Competence for the Next Century", has involved a whole range of institutions, academies, organizations, companies and independent contributors, who have given their comments.

There are twenty final points of ambition, the largest number concerning the university level.

The following are of specific relevance to the topic of this paper.

* Post-secondary education must be expanded to a volume and level comparable to that of the surrounding world. This calls for the strengthening of both university education and other post-secondary education.

* The number of graduates in technical and scientific subjects must increase at all levels.

* Adults must be guaranteed the right to a complementary education roughly equivalent to the core subjects of the upper secondary school. The most important subjects to raise the general level of competence are Swedish, English and Mathematics.

* There seems to be a growing need for post upper-secondary vocational education in order to improve vocational competence before entering the labour market. This is particularly significant when it comes to technical education programmes. There must be a close integration between theory and practical training in an enterprise.

A Government Bill has been presented on establishing post-upper secondary, but not academic, vocational education with the aim of giving highly qualified vocational competence. This education should include opportunities for alternating between theory and practice.

This type of education can, to some extent, already be found within municipal adult education. The intention is to stimulate more organizers of education to act. An important part should be played by enterprises. As was mentioned above, a Government Bill was passed in the Spring and a committee is now working on establishing a post-upper secondary, but not academic, vocational education with the aim of giving highly qualified vocational competence. This education should include opportunities for alternating between theory and practice. A very important part should be played by enterprises in economic and pedagogical terms in organizing and implementing this new type of qualified vocational education.

A post-secondary trainee education has recently been introduced. It is expected to increase competence in to-day's labour market situation, but is also expected to be of long-term structural significance.

Trainee education will combine work-place or in-company training with advanced theoretical education at universities, university college or in municipal adult education. The education should increase competence within an area that is relevant to the company involved, particularly for smaller and medium sized companies. It provides the opportunity of recruiting highly skilled personnel, who can develop competence to an extent that would normally only be possible in larger organizations.

8 Labour Market Policy training programmes

The Swedish labour market has been characterized by high labour force participation rates, for both men and women, relatively low unemployment and an active labour market policy. During the period 1970 to 1989 the unemployment rate did not exceed 4 percent in any single year. In 1990 came the recession, which has influenced the labour market for all, but more for young people.

The central goal of economic policy in Sweden has been, and still is, full employment combined with price stability, growth of the economy and a fair distribution of welfare. This is also the aim of labour market policy.

Labour market policy measures can be classified as either:
* matching measures, i.e. finding the right job for the right person or as
* supply-side measures, which in the long-run are intended to increase the labour supply or as
* demand-side measures aiming to increase demand and employment.

Matching measures include placement services, job seeking activities and vocational counselling. These services are provided by The Swedish Employment services which have a large market share and cover the whole country with about 360 offices and 60 specialized offices.

Supply-side measures consist of different kinds of employment training. These measures are important parts of the policy and are intended to improve the functioning of the labour market, prevent bottlenecks in labour supply and smoothen structural changes in the economy. The training can be provided either by the Employment Training Centres, by any other training co-ordinator including the regular education system, or through company training.

Demand-side measures aim to raise the demand for labour, to increase employment. Measures such as temporary public work and recruitment subsidies are mainly designed for people with a weak position on the labour market.

Labour market measures are meant as an aid for the unemployed or those who run a risk of being unemployed.

Employment training is, together with placement and counselling, the most important instrument of Swedish labour market policy. There are two kinds of employment training: training directed at unemployed job-seekers and on-the-job training.

Over a period of several years different kinds of measures have been created, especially for young people to help them gain a foothold on the regular market. These measures usually run for a maximum period of six months. In the case

of recruitment and wage subsidies the share of public contributions is flexible and settled through negotiations between the employer and the Employment offices.

In the present economic recession, the task of labour market policy is to increase the level of competence of the labour force through education and vocational training. During recent years, labour market policy has placed considerable emphasis on employment training.

Recruitment Support is a support for an employer who employs somebody unemployed. Though not restricted to young people, it is much used for them.

Employment training for the unemployed facilitates both occupational and geographical mobility and thereby adjustment in the labour market. Employment training helps to limit unemployment during a downturn in the economy and to promote labour recruitment during an upturn. It also strengthens the position of disadvantaged groups in the labour market. In this way, employment training contributes towards the attainability of growth-related, stabilisation-related and distributive policy objectives.

Employment training spans virtually all occupational fields and all levels, ranging from preparatory courses and general theoretical studies to, in some cases, courses at university level. Employment training contains extensive parts of information technology, in the sense of information technology as a tool and means in work.

Employment training takes the form of courses which are specially purchased by the County Labour Boards from various institutions or firms, private or public. It is also possible to use the capacity of the ordinary education system. The County Labour Boards plan their purchasing of employment training with reference to the demand of the labour market and to the special needs of new or further training for the individual job seeker.

About half of the purchased courses are acquired by the Employment Training Group (AMU) and take place at special Employment Training Centres, set up in the late 1960s and early 1970s. AMU provides employment and occupational training for adults. It has been from 1 July 1993 a State-owned company. The training at Employment Training Centres is, generally speaking, at an upper-secondary school level. Complete courses lead to complete occupational training. And, in addition, the Employment Training Centre can provide tailor-made training of any length and depth to suit a particular customer's needs. The training can thus vary from one or two days to a year or more.

Admissions at Employment Training Centres are made on a continuous basis. Terms, classes and forms are dispensed with. Instead the Employment Training Centres have developed what is known as the module system. This involves dividing the course syllabi into short, competence-based sections.

Consequently, training courses can be elaborated individually for each student by combining various elements in the best possible way.

Employment training is free of charge and participants receive training grants equal to unemployment benefit or a specific amount.

The total number of participants in fiscal year 1992/93 was in round figures, 175,000 or 4.0 % of the labour force. The average duration of training was about 17 weeks. Fifteen per cent of the trainees were occupationally handicapped, and another 21 % were foreign nationals. These categories, accordingly, are twice as well represented in employment training as they are among job seekers at employment offices.

Annual follow-up studies have shown that most people who begin employment training also complete it. Usually about 65–75 % of all students in the specially arranged vocational training courses also find jobs on the open market within six months after completing their studies. In 1993 the rate was only 25 % owing to the recession.

The purpose of the Youth training scheme is to give young people aged 18 to 24 useful and necessary vocational training, practice and experience from employment, mainly in the private sector. The measure is defined as training and lasts for a period of six months. The period can be prolonged up to 12 months. Employers are obliged to provide an introduction, guidance and meaningful practice. The programme may not be used to replace ordinary staff. Trainees are free to leave the training scheme at any time during this period to take an ordinary job.

From 1 July 1993 a special youth training scheme was introduced for university graduates aged 25-29. The aim is to give them practice and experience for a period of 6 months.

The youth training scheme is a temporary measure, introduced in a severe labour market situation, and meant to come to an end in 1995.

The youth training scheme has been studied and evaluated by some researchers. One conclusion is that it is a first step to form a bridge from school to working life but that it must be combined with counselling and elaborated individual plans. It should not be recommended as an apprenticeship, open to everyone leaving school. It would be restricted to an element in a labour market policy directed to unemployed young people.

In addition to employment training for the unemployed, State grants are also payable, on certain conditions, to employers in connection with employment training for existing employees and for the hiring of new employees.

This labour market policy measure has been applied for many years to bottleneck training, i.e. training for skilled jobs where there is a shortage of

skilled personnel and training for potentially redundant workers who would otherwise run an imminent risk of being laid off.

About 52,000 persons took part in this kind of on-the-job training in fiscal year 1992/93.

To enable both industry and the public sector to make the necessary investment in personnel education, employers can from the 1991/92 fiscal year receive a payroll levy reduction if they hire a temporary replacement for the employee who is undergoing training. Educational leave replacements have the dual purpose of training existing employees and giving temporary jobs to unemployed people. The program has proved to be a very efficient measure for bringing down unemployment and also for employers to improve the skills of their employees. At the moment there are 15 500 persons per month participating in this kind of training.

9 Higher education

Higher education in Sweden is divided into undergraduate studies and post-graduate studies and research.

In 1977 practically all post-secondary education, i.e. all university-type education as well as non-academic colleges for different kinds of vocational education and training, was incorporated into one and the same system. The system included a strong element of national planning and regulation. The aims and length as well as the location and financing of most study programmes were laid down by Parliament. Until 1989 the State also established the curricula for each programme.

A reform aiming at a deregulation of the unitary system of higher education and greater autonomy for the individual institutions of higher education was adopted by Parliament in 1992 and on 1 July 1993 a new Higher Education Act came into effect. Under this the dimensioning of different programmes and the allocation of grants between institutions will be influenced by the requirements of the individual students and the achievements of the individual institutions in terms of both quality and quantity. The organisation of study and range of courses on offer are determined locally.

Students are able to freely choose their study route and to combine different subject courses into a degree. For study intended to lead to a degree, courses may be combined to form an educational programme, if the university or university college so wishes.

The requirements for various courses of study are set out in the Degree Ordinance. All courses and educational programmes also have to follow

curricula, established by the individual university or university college. A first degree programme will generally take between 2 and 5 1/2 years to complete. The single-subject courses vary in length from 5 weeks to 1 1/2 years.

There are two kinds of first degrees - general degrees and professional ones. The professional degrees *(yrkesexamen)* are awarded upon completion of programmes of varying length leading to specific professions, e.g. University Diploma in Medicine or Engineering. The general degrees are:
- Diploma *(högskoleexamen)* after studies amounting to not less than 80 points (2 years of study).
- Bachelor's degree *(kandidatexamen)* after completion of at least 120 points (at least 3 years of study), including 60 points in the major subject and a thesis of 10 points.
- Master's degree *(magisterexamen)* after studies amounting to not less than 160 points (4 years of study), including 80 points in the major subject and one thesis of 20 points or two of 10 points.

A number of programmes include practical training in the relevant industry or the public sector. Sometimes the practical training takes place during the university vacation in Summer. In many programmes a large part of the final term is devoted to work on a degree project or thesis. Students carry out these projects individually or in small groups.

The purpose of higher education, as stated in the Higher Education Act of 1993, is to provide education and carry out research and that there should be a close connection between these. Quality is emphasized as is the effective use of available resources. Equality between men and women should be observed throughout higher education. Universities and university colleges should also promote an understanding of other countries and international exchanges. State institutions are:
* The Universities of Uppsala, Lund, Gothenburg, Stockholm, Umeå and Linköping
* 16 university colleges in different parts of the country
* Single-faculty institutions, i.e. Chalmers University of Technology, the Karolinska Institute (Medicine and Dentistry), the Royal Institute of Technology, the Stockholm Institute of Education and the University College of Physical Education and Sports
* 8 smaller university colleges in Stockholm for various areas in the Arts.

Under the auspices of the county councils there are twenty-six colleges of Health Sciences, which provide preparatory programmes for work in the paramedical professions.

During the 1970s and 1980s the higher education system in Sweden had nearly the same size with a total number of entrants of between 40,000 to 45,000 per year. During the last few years there has been a steady expansion in the total number of places for undergraduate studies and by the mid-'90s will increase by about 30 per cent.

Statistics 1992

Students	257,000
whereof	
Postgraduate studies	15,800
Undergraduate studies	230,500
distance education	10,700

Higher education is free of charge. There is a post-secondary study assistance scheme which applies to students in undergraduate education at universities, university colleges and certain other establishments, as well as to students aged 20 and over attending upper secondary school and other forms of upper secondary schooling.

Admission

To be admitted to higher education in Sweden, a student must first fulfil the general eligibility requirements which are common to all programmes or courses, and then meet the specific eligibility requirements which are usually imposed on applicants by the individual university or university college. The latter vary according to the field of education.

The general eligibility requirements for undergraduate education are the successful completion of a 3 year national programme of the upper secondary school or other equivalent Swedish or foreign education or the acquisition of the equivalent level of knowledge, e.g. through work experience. Applicants having a mother tongue other than one of the Nordic languages shall possess the requisite knowledge of Swedish, acquired e.g. through a preparatory course in Swedish of one year's duration. A very good command of English is a requirement for all applicants.

Responsibility for the admission and selection of students rests with the institutions themselves. Within a general framework, they are able to decide what selection criteria shall be used for admission to their courses and whether the admission procedure shall be carried out locally or by using the central service function provided by the National Agency for Higher Education.

For the selection of students one or more of the following criteria are applicable: school marks; results on the university aptitude test (a national, non-compulsory test) or a special test (e.g. interviews), or previous education and work experience.

Roughly 30 % of young persons go on to higher education after completion of their compulsory and upper secondary schooling. Apart from students coming straight from school, the post-secondary student population includes a relatively large proportion of mature students, i.e. students who have previously acquired work experience.

9.1 Coherence between upper secondary education and higher education

As described, education at both upper secondary level and higher education are being reformed in Sweden. The old patterns of coherence are changing.

Before, the universities were used to seeing students mostly coming from the academic three and four year lines of the upper secondary school – and from upper secondary adult education. Now students automatically fulfil the general eligibility requirements if they have completed any national or specially designed programmes. The universities have however in practically all university programmes set up the two national academic programmes of the upper secondary school as specific eligibility requirements. It has been argued that the universities have undermined that part of the reform of the upper secondary school, which gives all upper secondary school leavers general eligibility for university studies.

The guidance personnel at the upper secondary schools are on the other hand at a loss with the specific eligibility requirements changing from one university – and often from one institution of the university – to the other. What advice should the pupils be given? Should they all go to the academic programmes even if they want to work directly after leaving school and not have any vocational training just because they might wish to have university studies as a possible alternative sometime in the future?

The freedom of the universities and the municipalities to form their education and for individuals to choose and form their own education might lead to unfavourable consequences. On the other hand, who wants the old centralized system back? Most people think, that both schools and universities will learn to inform each other and thereby make it easier for students.

Statistics Sweden carried out in the spring 1993 a survey[7] of the interest in higher education among the pupils soon leaving the upper secondary school. Nearly half of the pupils intended to apply for higher education in the following three years, women to a higher degree (54 %) than men (42 %). One third answered that they might go on to higher education but had not as yet decided. One fourth of the men and 12 % of the women were not interested in higher education, stating that they were tired of school, already considered themselves sufficiently educated or intended to go on to a second upper secondary education. 40 % of the pupils in vocational education were not interested in higher studies.

The differences in interest between genders remain. Only 5 % of the women were interested in higher technology studies.

[7] Statistiska meddelanden U 80 SM 9401, Ungdomars intresse för högre studier; Plans for Higher Education. A Survey in Autumn 1993

9.2 Higher technical vocational education

Higher technical vocational education is a three semester long university education with a total amount of 60 points. The aim is to give a broader and deeper knowledge within a vocational field. The eligibility requirements are at least four years of work within the actual occupational sector after having completed the upper secondary vocational education. Persons lacking upper secondary education shall have six years work experience.

The first part of the higher technical vocational education is spent on basic subjects, such as Swedish, mathematics, physics, chemistry and computers. Those who have not studied for some time are advised to prepare themselves by studying mathematics for one semester at a municipal adult education course.

The teaching of vocational subjects at higher technical vocational education is carried out by people from the same sector of the labour market. Study visits and projects are important parts of the education.

There is higher technical vocational education in e.g. mechanics, woodwork, electronics, building, graphics and processing.

10 Local resource and community development centres

In recent years there has been an increasing focus on co-operation between education organisers in Sweden. Competition between education organisers can lead to both revitalisation and cost reduction. Malfunctioning co-operation can, on the other hand, lead to wastage of resources in terms of premises and equipment.

Since 1991 the Government has been giving financial and other support to the setting up of "Knowledge Centres" in the municipalities. In the Autumn of 1994 a network of knowledge centres was set up in the Nordic countries.

Co-operation is meant to take place between upper secondary school, municipal adult education, universities and university colleges, employment training centres and, of course, industry and commerce. The centres must develop out of local circumstances by taking advantage of the existing local situation. Common management is a key issue. It is important to have a clear and distinct management function in order to avoid power conflicts at the management level.

It is important to underline that there is not just one single model representing the concept of a local resource and community development centre. Over the

last two years different models for local resource and community development centres have been developed. There is no single model to cover all situations, the specific model used must depend on the conditions existing at the local level. In fact there has been a tendency for the concept of local resource and community development centres to be used as a way of solving and carrying out education tasks. It is a question of using available resources optimally through co-operation thereby achieving qualitatively good results.

This means that a centre must be based on a concept that has been carefully thought through and accepted by the political leadership of the municipality, the school personnel and local industry. Vital for success is to get teachers involved at an early stage so that they are conscious of and appreciate the conditions and working forms that are a prerequisite for the education to match the requirements of the future.

The centres also contain opportunities for development and further education and training. In the best case the centre becomes a forum where different pedagogical ideas confront each other, where different traditions meet and where representatives for education can have a dialogue with representatives from the world of industry and commerce.

PRE-SCHOOL EDUCATION

Pre-school education in Sweden belongs to the public child care sector and is regulated under the Social Services Act of 1980. The aims and dimensioning of public child care are decided on by Parliament, whereas the Ministry of Health and Social Affairs is responsible for the preparation of laws and proposals related to child care. The National Board of Health and Welfare and the county administrations are together responsible for supervising the pre-schools and other forms of child care nationwide.

The aim of public child care is that it should be available to all children whose parents so wish. Since 1975, all children aged 6 and over, as well as handicapped children from the age of four, have been eligible for pre-school education for a minimum of one year. This opportunity is optional for the child, but mandatory for the municipal authorities.

Public child care is jointly financed by the municipal budget and parental fees. Only pre-school for 6 year-olds is free of charge to parents. All public child care is coeducational.

In 1985, Parliament decided that public child care was to be expanded so that by 1991 all pre-school children over the age of eighteen months would be provided for. In some municipalities this goal has not yet been fulfilled. Where there are insufficient places, children in need of special support for their development, e.g. children who are physically or mentally handicapped, shall be given priority in the allocation of pre-school places. Parliament decided, in December 1993, on amendments to the Social Services Act whereby the municipalities shall be obliged to offer all children aged 1–12, whose parents are gainfully employed or studying, a place in public or private child care, starting the 1 January 1995.

Child care services take the following forms:
- day care centres (*daghem*) for children aged 1–6 years, whose parents are gainfully employed or studying. Day care centres are usually open between 6.30 in the morning and 18.00 in the evening, Monday to Friday, all year round. In day care centres, children are usually divided into mixed-age groups. These groups are made up of either small children up to the age of three, sibling groups (usually 3 to 6 years), or extended sibling groups which can include children of all pre-school ages as well as younger schoolchildren. The average day care centre has four groups or sections, each with some 15–18 children.
- part-time groups (*deltidsgrupper*), which cater for children aged 4–6. These groups follow the school year and meet for three hours daily, morning or afternoon.
- open pre-school (*öppen förskola*) targeted at pre-school children without any other kind of pre-school place. The children attend a few times a week in the company of a parent or family child minder.

– after-school centres (*fritidshem*) for children aged 6/7 to 12 years. The purpose of these centres, which are open before and after school as well as during school holidays, is to provide after-school activities and learning options in addition to the school curriculum. After-school activities are often an integrated part of school. It is also becoming increasingly common for day care activities and school to be housed in the same building. In addition, different ways are being tried of facilitating the transition between pre-school and school, i.a. through special programmes for 6 year-olds.

The term pre-school (*förskola*) is used to denote day care services, part-time groups and open pre-schools.

The aims and responsibilities of the pre-school and after-school centres have been set out in pedagogic programmes issued by the National Board of Health and Welfare. Together with the parents, one of the tasks of the pre-school is to integrate the child into society. Its activities, which should be planned in close cooperation with the parents, should be based largely on the childrens' life situation, their interests, previous experiences and special needs.

The work in pre-schools covers the following main areas: cultural activities such as language, drama, music and art, painting and pottery; nature orientation and community life. These topics manifest themselves through play, creative activities, daily tasks, etc. There are also daily outdoor activities throughout the year. Pre-school does not convey school education per se, but it should provide preparatory training for school.

Child care activities are usually operated by the municipalities. As a complement to the activities conducted on municipal premises the municipality employs family child care minders to care for children aged 1–12 years in the minder's own home. Private day care and after-school centres are also becoming increasingly common. In many municipalities, these centres receive a compensatory transfer payment from municipal funds.

Statistics 1992

Institutions	13,949*
whereof	
day care centres	7,359
after-school centres	3,103
part-time groups	2,488
* family day care not included	
Children	503 589
whereof	
day care centres	315 550
after-school centres	127 146
part-time groups	60 893

Time-schedule for compulsory school

Teaching hours for subjects or groups of subjects in total during the nine years. Each school decides on the distribution of these hours over the nine year period.

Subject	**Minimum hours from 1 July 1995**
Arts education	230
Domestic science	118
Sports and health	460
Music	230
Crafts	282
Swedish	1 490
English	480
Mathematics	900
Geography History Religion Social sciences	885
Biology Physics Chemistry Technology	800
Foreign language	320
Pupil´s choice	470
Total	**6 665**
School electives	410

Need for competence

Table 1[8]	Growth of industrial society, around 1900	Maturity of industrial society, 1950 - 1960	Post-industrial knowledge-society of to-day
Market	Local, eye to eye	National and international mass market	Segmented, differentiated
Unit of production	The individual, the team	The collective	The individual, the team
Production	Piece-production, handicraft	Mass-production, large volumes	Specially tailored
Need of competence	Experience craftsmenship Social competence	Punctuality Speciality	Ability to learn, comprehensive view, social competence
Organization	Surveyable, Family business	Not possible to survey, hierarchy	Small flexible units in networks
Public sector	Small, surveyable municipalities	Large, strong, sectorized	Against decentralisation, cross-functions
Knowledge	Practical, surveyable, permanent	Specialized segmented	Specialized and comprehensive Changeable
Learning	Face to face	School	Lifelong learning
Channel of communication	Oral	Written	Multimedia
Change of structure	Quick, unpredictable	Quick, predictable	Quick, unpredictable

[8] Mot nya uppgifter? Om synen på morgondagens arbete av Mats Lindgren; 1/94 Framtider, Institutet för Framtidsstudier.

CEDEFOP – European Centre for the Development of Vocational Training

Coherence between compulsory education, initial and continuing training and adult education in Sweden
Sonja Hjorth
Ministry of Education and Science, Sweden

CEDEFOP panorama

CEDEFOP – European Centre for the Development
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Last year, responding to a request from the Commission, the Centre undertook the analysis of the educational and vocational offer in 10 Member States, Norway and Sweden, comparing their ability in making links and interfaces between the various means, content, duration and place of learning in order to facilitate access to the lifelong learning process.

In their original content, form, and language, the twelve national reports are available from CEDEFOP. A comparative analysis is currently being prepared by Guildford Educational Services, UK, and upon completion will also be available.

Because of the increased demand for information on the education and training systems in the new Member States, the Centre is presenting in its CEDEFOP-panorama the Swedish text already published under the auspices of the Ministry of Education.

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